

304

675x .091

Work Order ID 107670

107670

Page 1

September-27-13 1:09:39 PM

Item ID: D2282-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Tube

Start Date: 9/27/13 Start Qty: 20.00

20

Cust Item ID:

Required Date: 9/27/13 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: MJS

Date: 13-09-30

Tooling: Date: Run Start *NR1*

QC: _____

Date: _____

SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2282	Rev E	0.00	DAS 40 9-09	13/10/02	20	Ø		
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100		Hardinge CNC LATHE SMALL						
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100		Memo	0.00	DAS 40 9-09	13/10/02	20	Ø	
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Hardinge		Hardinge CNC Lathe Small	1-Turn as per Dwg D2282 and Folio FA188 2-Deburr					
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110		QC2- Inspect parts off machine FAI/FAIB	0.00	DAS 40 9-09	13/10/02	20	Ø	
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110		Memo	0.00					
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QC		Quality Control						
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120		QC8- Inspect parts - second check	0.00	DAS 08 9-09	13/10/02	20	Ø	
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120		Memo	0.00					
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QC		Quality Control						
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NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>	Equip/Tooling <input type="checkbox"/>	Operator <input type="checkbox"/>	Material <input type="checkbox"/>	Setup <input type="checkbox"/>	Other <input type="checkbox"/>	Process <input type="checkbox"/>	Supplier <input type="checkbox"/>	Training <input type="checkbox"/>	Unapproved <input type="checkbox"/>		
FAULT CATEGORY											
Landing Gear					General						
					Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube <input type="checkbox"/>	Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burr <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/>	Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabelled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/>	Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/>	Other <input type="checkbox"/>	

Work Order ID 107670

107670

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September-27-13 1:09:39 PM

Item ID:	D2282-3	Accept	*N900040100*	Setup	Start	*NS1*	
Revision ID:				Stop		*NS2*	
Item Name:	Tube						
Start Date:	9/27/13	Start Qty: 20.00	*20*	Cust Item ID:			
Required Date:	9/27/13	Req'd Qty: 20.00	*20*	Customer:			
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Packaging	Identify as per dwg & Stock Location: <i>W/A</i>	0.00				20			13-10-08 <i>BC</i>
Packaging	Memo *****STOCK IN LARGE FAB*****	0.00							
140 *140* QC	QC21- Final Inspection - Work Order Release	0.00							<i>John 13/10/10</i>
Quality Control	Memo	0.00							

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS															
Part No. _____			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description			Sign & Date	Verification	QC Inspector								
Doc/Data <input type="checkbox"/>																					
Equip/Tooling <input type="checkbox"/>																					
Operator <input type="checkbox"/>																					
Material <input type="checkbox"/>																					
Setup <input type="checkbox"/>																					
Other <input type="checkbox"/>																					
Process <input type="checkbox"/>																					
Supplier <input type="checkbox"/>																					
Training <input type="checkbox"/>																					
Unapproved <input type="checkbox"/>																					
FAULT CATEGORY																					
Landing Gear	General				General				General				General								
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>																
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>																
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>																
	Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>																
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>																	
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>																	
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>																
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>																		
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>																		
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>																		
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>																		

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS												
Part No. _____	Work Order Update	Rework	Scrap	Use-as-is	Thermoforming	Skid-tube	Machining	Large Fab	Crosstube	Small Fab	Finishing	Water Jet	Prod. Eng. Coor.	Rec/Store/Packaging	Supplier	Engineering	Quality	Other
NCR No. _____																		
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description			Sign & Date	Verification	QC Inspector					
Doc/Data																		
Equip/Tooling																		
Operator																		
Material																		
Setup																		
Other																		
Process																		
Supplier																		
Training																		
Unapproved																		
FAULT CATEGORY																		
Landing Gear				General														
Bending		Bend		Grain		Ovalized		Pressure/Forced		Temperature/Cure		Weld		Wrong Stock Pulled		Other		
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance												
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect												
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing												
Cuffs		Contamination		Maintenance		Part Moved												
Heat Treat		Countersink		Mislabeled		Positioned Wrong												
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge												
Ripples in Bend		Drill Holes		Offset														
Torque Waves in Extrusion		Drawing		Out of Calibration														
Turning Sequence		Finish		Out of Sequence														
Wave/Twist in Tube		Folio		Outside Dimensions														

DART AEROSPACE LTD	Work Order:	107670
Description: Handle Tube	Part Number:	D2282-3
Inspection Dwg: D2282	Rev: E	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

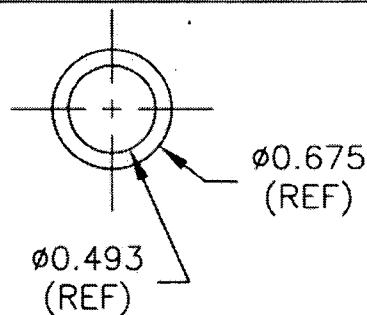
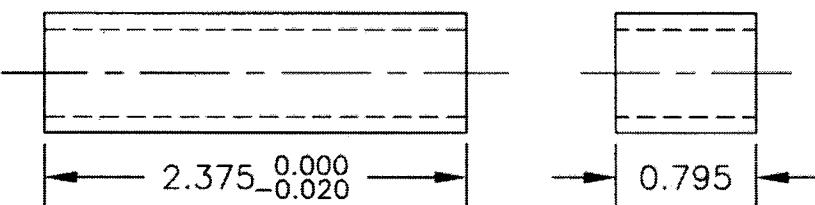
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Measured by:	40 S-89	Audited by:	B.A 08 S-89	Prototype Approval:	N/A
Date:	13/10/02	Date:	13/10/02 S-89	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.11	New Issue P/O D350-615-041	KJ/RF	
B	05.04.19	Tolerance changed	KJ/JLM	
C	06.03.15	Dwg Rev update	KJ/JLM	
D	09.10.01	Dimensions updated	KJ	



DESIGN BW	DRAWN BY <i>PZ</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>AP</i>	APPROVED <i>100%</i>	DRAWING NO. D2282	REV. E SHEET 1 OF 2
DATE 05.06.07		TITLE HANDLE TUBES	SCALE 1:1
A	94.10.14	NEW ISSUE	
B	95.03.23	RE-DESIGN	
C	97.10.20	CORRECTED NUMBERING SCHEME	
D	05.03.16	REDESIGN D2282-5; 0.795 WAS 0.750	
E	05.06.07	D2282-5 304 SS WAS 303 SS; R0.063 x 0.063 WAS R0.080 x 0.030	

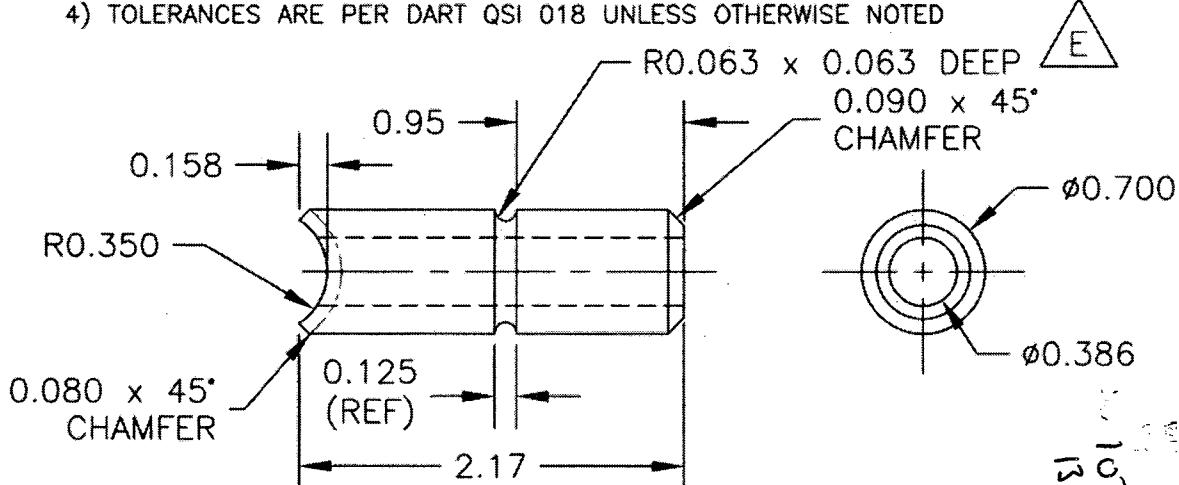


D2282-3

 D2282-7

D2282-3/-7 TUBE:

- 1) MATERIAL: T304/T316 3/8 SCHEDULE 40 (REF. DART SPEC. M304TR0.675W.091)
- 2) BREAK ALL UMARKED SHARP EDGES 0.005 TO 0.010
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



 D2282-5

D2282-5 STEM:

- 1) MATERIAL: AISI 304 STAINLESS STEEL (REF. DART SPEC. M304R0.750)
- 2) BREAK ALL UMARKED SHARP EDGES 0.005 TO 0.010
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

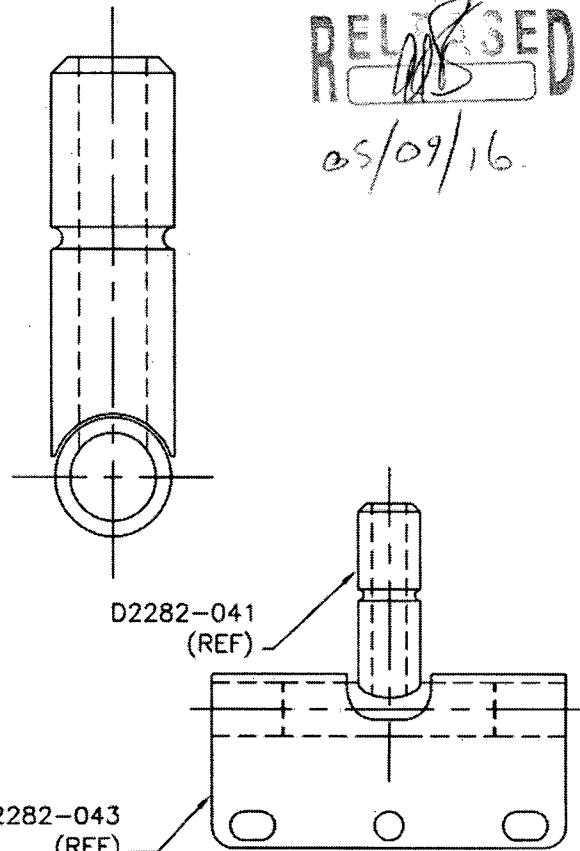
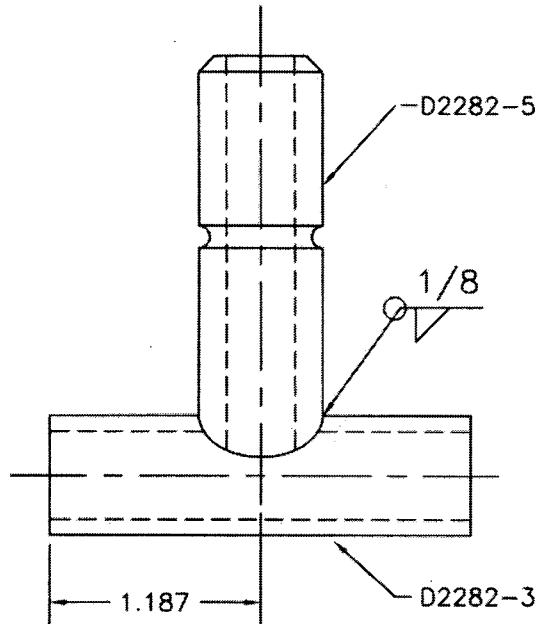


UNLESS
NOTED
SUCH AS
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
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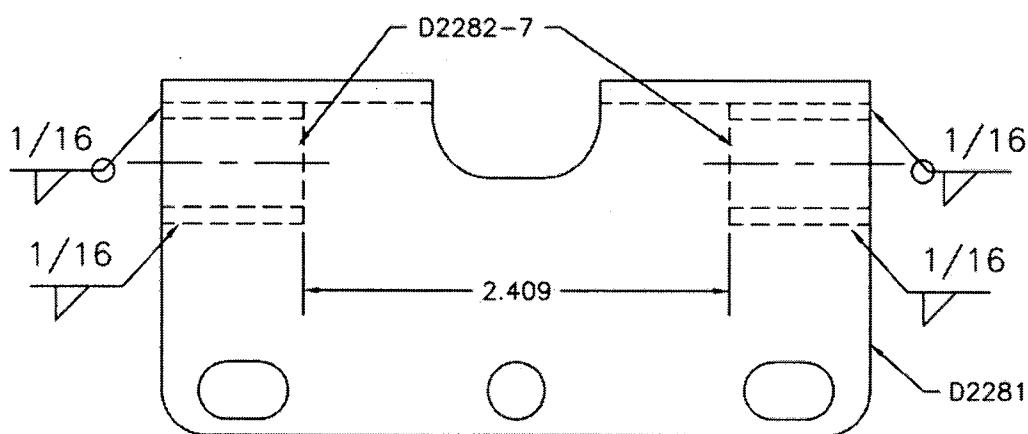
DART

DESIGN BW	DRAWN BY <i>AB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>UP</i>	APPROVED <i>AB</i>	DRAWING NO. D2282	REV. E SHEET 2 OF 2
DATE 05.06.07		TITLE HANDLE TUBES	SCALE 1:1



D2282-041 'T' ASSEMBLY
WELD ASSEMBLY PER DART QSI 004

GENERAL ASSEMBLY
SCALE 1:2



D2282-043 SADDLE ASSEMBLY
WELD ASSEMBLY PER DART QSI 004

05/09/01